(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau





(43) International Publication Date: 3 November 2005 (03.11.2005)

PCT

(10) International Publication Number: WO 2005/103077A1

- (51) International Patent Classification⁷: C07K 14/525, C12N 15/62, 15/63, A61K 38/19
- (21) International Application Number:

PCT/EP2005/003158

(22) International Filing Date:

24 March 2005 (24.03.2005)

(25) Filing Language:

German

(26) Publication Language:

German

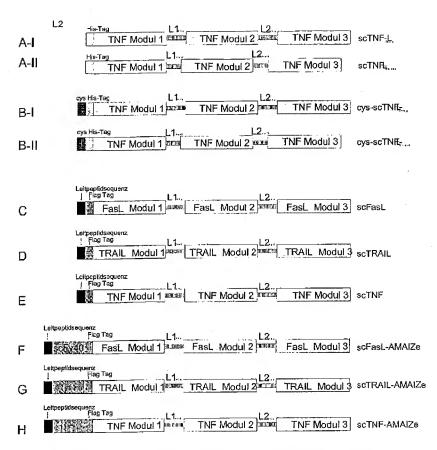
(30) Priority Data:

100 2004 014 983.6 26 March 2004 (26.03.2004) DE

- (71) Applicant (for all designated states except US): UNIVERSITY OF STUTTGART [DE/DE]; 70049 Stuttgart (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only):
 PFIZENMAIER, Klaus [DE/DE];
 Seehausstrasse 7, 75233 Tiefenbronn (DE).
 SCHEURICH, Peter [DE/DE]; Marsweg 4,
 70565 Stuttgart (DE). GRUNWALD, Ingo
 [DE/DE]; Riekestrasse 15, 28359 Bremen (DE).
 KRIPPNER-HEIDENREICH, Anja [DE/DE];
 Friedrich Schaal Strasse 22, 72074 Stuttgart (DE).

[Continued on next page]

(54) Title: RECOMBINANT POLYPEPTIDES OF THE MEMBERS OF THE TNF LIGAND FAMILY AND USE THEREOF



(57) Abstract: The invention relates to polypeptides comprising, as constituent A, at least three monomers of a member of the TNF ligand family and, as constituent B, at least two peptide linkers that link the monomers of the member of the TNF ligand family to one another. The invention also relates to the use of these polypeptides for treating diseases and for producing a medicament or a vaccine. The invention also relates to methods for producing and isolating these polypeptides, to nucleic acids that code for these polypeptides, to vectors containing these nucleic acids, to host cells transfected with these vectors, and to pharmaceutical containing compositions Finally, the inventive objects. invention relates to methods for the extracorporeal manipulation, depletion and/or removal of components contained in body fluids, e.g. by means of apheresis.

Key: Leitpeptidsequenz = leader peptide sequence; Modul = module

[Continued on next page]

- (74) Attorneys: GRAF VON STOSCH, Andreas et al.; Bosch Graf von Stosch Jehle Patent Attorney Group MBH, Flüggenstr. 13, 80639 Munich (DE).
- (81) Designated states (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, Published: HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, _ LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, — MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, For the two-letter codes and other abbreviations, refer to the "Guidance YU, ZA, ZM, ZW.
- (84) Designated states (unless otherwise indicated, for every kind of regional protection available): ARIPO

(BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

With an international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Notes on Codes and Abbreviations" at the beginning of each regular issue of the PCT Gazette.